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# Beach Water Safety
# Testing Guidelines

Developed by an Interdepartmental Task Force on Beach Safety
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The US Environmental Protection Agency recommends that water samples be taken at swimming areas frequently to determine the water quality at the time of the test. It is important to understand however, that there are many variables that come into play that may result in unhealthy water. If a sample is taken weekly, for example, that sample may be satisfactory, yet a day or two later, conditions may change resulting in unhealthy conditions. This is why swimmers need to be aware that there are steps that they need to take to protect themselves and others from recreational water illnesses. Further, the weather plays a big part in the water quality, particularly if there is a rainstorm. Lastly, large bather loads can contribute to unhealthy water quality. For more information, go to our Healthy Beach web site at: http://www.state.me.us/dep/blwq/beach.htm

The following are recommendations on methods and protocols for testing of beach water, and for the limits of bacteria allowed in such samples.

Fresh Water: E. coli, tested by MMO-MUG methodology (Colilert or like product using the "Quantitray" MPN technology).
Maximum allowable level to be **235 organisms per 100 ml.**

Marine Water: Enterococci, tested by the "Enterolert" product, using Quantitray MPN technology.
Maximum allowable level to be **104 organisms per 100 ml.**

It is believed that these methods will be available in most labs, and that their use will provide the simplest and broadest testing options. Proficiency should be demonstrated in the use of the MMO-MUG or Enterolert technique, and the lab may be certified for drinking water bacteriology by the MMO-MUG method.

Samples must be collected in sterile bottle provided by the testing laboratory. Each sample submitted should include the following information:

Location
Time of collection
Date of collection
"Report to:"
Phone number and address
Notation of unusual conditions (rain within last 24 hours, etc…)
"Routine sample" versus "Special event" vs "Recheck"

Unusual events and special events include rainfall, known sewage or other spills, known fecal accidents in the swimming area, illness, outbreak investigation, and violation of the standard (allowable limit).

Samples should be collected ONLY in sterile bottles supplied by the testing lab. Samples should be collected near the surface, in water 12 to 24 inches deep. Do not "skim" and do not pick up sediment from the bottom. Leave ½ to 1 inch air space in the bottle.

Samples should be delivered to a lab within 6 hours, or if placed on ice or refrigerated, delivered within 30 hours.

All beaches should conduct a Sanitary Survey annually, to determine specific risk conditions, and to help determine frequency and location of sampling.

Sample frequency should generally be a minimum of once per week, or as determined by specific conditions of the particular beach, determined by the sanitary survey. Testing may be less frequent if a beach is determined to have limited bather load, deep and cold water with a high circulation rate, and to have negligible use by young children. Testing may need to be more frequent in times of hot weather and high bather loads, poor water circulation, high water temperatures, high usage by young children, or known fecal accidents.

Testing should occur on days of maximum usage, in mid afternoon. Testing should occur from Memorial Day to Labor Day, or thereabouts, depending on the specific usage of the beach. Sampling may not be necessary during prolonged periods of cold, rainy weather, when bather load is negligible.

Additional testing may be necessary after significant precipitation events. In the event of "failed" samples after rain events, future testing before and after rain events may help determine the specific contributing sources to contamination of the beach.

It is expected that a beach will be "closed" if a sample results in a "violation", and not reopened until, among other things, a sample is tested with an "acceptable" result.

Other beach operation guidelines are the responsibility of the “how to run a safe beach/public education” subcommittee, and it is our expectation that they will have more details on frequency of sampling and closure strategies.

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